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UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH ADMINISTRATION
BUREAU OF ENTOMOLOGY AND PLANT QUARANTINE
WASHINGTON, 25, D. C.

In Cooperation with State, Federal and other Agencies

COTTON INSECT CONDITIONS FOR WEEK ENDING JULY 27, 1946
(Ninth Cotton Insect Survey Report for 1946)

Boll weevils are taking a terrific toll on thousands of farms in 9 of the leading cotton-growing States from North Carolina to Texas. Many growers, especially in Texas, Oklahoma, Louisiana, Mississippi and Alabama, are making a fight against the weevil by dusting with calcium arsenate. Unfortunately there are many farmers in all of the nine states who are allowing boll weevils to destroy a large part of their crops that could be saved by the proper application of calcium arsenate. Weevils are now so abundant that unless the cotton is dusted there is prospect that they may cause greater reduction in yield than in any recent year. Much of the cotton should be dusted now to protect the bolls that have been set. Late dusting gives greater returns per application than early applications of calcium arsenate and there is less danger of building up aphid infestations. Many thousands of bales of cotton can still be saved by making 2 to 4 applications of calcium arsenate dust during August, or until the bolls are safe from weevil attack. Growers who do not protect the bolls may experience very serious weevil losses.

The bollworm is causing serious damage on many farms. This damage is increasing in Texas and has been reported as serious in Louisiana and several other States. The present prospect is that the bollworm will cause greater loss than for several years.

The cotton leafworm now has been reported over a large part of Texas as far west as Presidio County in the Big Bend. It has reached Louisiana and Arkansas. At present the cotton leafworm situation is similar to what it was in 1943. The leafworms are now more widespread and numerous than they were at this time in 1944 and 1945.

BOLL WEEVIL

TEXAS: High temperatures and poisoning reduced weevil infestations, but much damage is being caused to late squares and young bolls in rank-growth cotton in the eastern half of the State. Except in the Coastal area and some southern counties where rains occurred, soil moisture is depleted in most areas of the State. Cotton is maturing rapidly and many northern and western counties are suffering from high temperatures and drought.

The average weevil infestation in 448 fields in 53 Texas counties was 37%. No infestation was found in 9% of the fields. Less than 10% of the squares were punctured in 16% of the fields; from 10 to 25% in 19% of the fields; from 25% to 50% in 20% of the fields; and over 50% were punctured in 36% of the fields. There was no weevil infestation reported in the High Plains Area, and the infestation was light in the Low Rolling Plains Area. Infestations are still spotted in the Cross-Timber section; the average infestation was 18%. Near Waco in McLennan and adjacent counties the average weevil infestation dropped from 34% to 26% punctured squares during the past week.

The infestation ranged from 2% to 54% punctured squares. The average infestation in that area is now about the same as at this time last year and in 1941. In this area much poisoning has been done for boll weevil control and the cotton has set many bolls that must now be protected from the bollworm.

OKLAHOMA: High temperatures and poisoning reduced weevil infestations. Much-needed rains fell in several southern counties, but many areas are suffering from drought. The average boll weevil infestation in 130 fields in 14 counties was 24%. No weevils were found in 3% of the fields. In 32% of the fields less than 10% of the squares were punctured; in 31% of the fields the infestations ranged from 10 to 25%; in 22% of the fields from 25 to 50%; and in 12% of the fields more than 50% of the squares were punctured.

LOUISIANA: Weather conditions continued favorable for weevils and unfavorable for cotton cultivation, and the weevil situation is critical. There may be sufficient poison to complete the boll weevil poisoning program, but the supply of calcium arsenate-nicotine mixtures is far below the demand.

The average boll weevil infestation in 123 fields in Louisiana was 51%. One percent of the fields were not infested. The infestation was less than 10% in 6% of the fields; from 10 to 25% in 15% of the fields; from 25 to 50% in 28% of the fields; and over 50% in 50% of the fields.

ARKANSAS: Boll weevil infestations in southwestern Arkansas are severe in spite of hot, dry weather for several weeks. In southeastern Arkansas where weather conditions were more favorable for the weevils the infestations increased considerably during the week. The average infestation in 51 fields in Arkansas was 37%. Less than 10% of the squares were punctured in 8% of the fields; from 10 to 25% in 24% of the fields; from 25 to 50% in 41% of the fields; and over 50% were punctured in 27% of the fields.

MISSISSIPPI: Dr. Clay Lyle reported showery weather over the State and a sharp rise in weevil infestation. Boll weevils were found in 184 of the 248 fields examined in 39 counties, with an average of 33% of the squares punctured in the infested fields, or an average of 24% in all fields, if the 64 fields found free of weevils are included. These infestation averages are double the infestation averages of last week and are much higher than at this time in 1945. A year ago an average of 17% of the squares in all fields and 22% of the squares in the infested fields were punctured as compared to 24% and 33% now.

Weevils were found in all of 41 fields examined by private party in Lee County in the northeastern section of the State. The infestations ranged from 5 to 39% and averaged 13% punctured squares. In the Upper Delta Counties most of the fields are still free of weevils. Of the 39 fields examined in Bolivar, Coahoma, Quitman and Tallahatchie Counties, 31 were free of weevils. There are also many fields in which no punctured squares could be found in Leflore, Sunflower and Washington Counties. In the southern Delta counties most of the fields are heavily infested. All of the 21 fields examined in Issaquena, Warren and Yazoo Counties were heavily infested. In Warren County 5 of the 8 fields examined had infestations higher than 82% punctured squares. Two of the fields in Yazoo County had more than 90% of the squares punctured.

A large planting company in Bolivar County reported that punctured squares were found in all of the 301 fields examined, but in only 32 of these fields did the infestation exceed 30% punctured squares. The highest infestation was 72%. This company reports that weevils have increased rapidly during the past week and that all of the fields where the infestation is over 30% are being dusted with a mixture of calcium arsenate and nicotine for the control of the boll weevil and cotton aphid. The average infestation in these fields is 17% as compared to 15% last week, 10% a year ago, and 11% during the same week in 1944.

GEORGIA: Mild temperatures and rains were favorable for the weevils. All of the 116 fields examined in 38 counties were infested. In the southern counties 58 percent of the fields had more than 40% of the squares punctured while in the northern counties 67% of the fields had less than 20% of the squares punctured. On only 11 of the 84 farms visited in the southern counties were the owners protecting their cotton by the use of calcium arsenate while on 17 of the 32 farms visited in the northern counties the owners were dusting their cotton to control the weevils. Boll damage is very serious in most fields where calcium arsenate is not being used.

SOUTH CAROLINA: Boll weevils were found in all of the 149 fields examined in 22 counties. The situation appears very critical as in 84 of the fields more than 50% of the squares were punctured and more than 25% were punctured in 143 of the 149 fields. One field in Darlington County was the only field examined in the State that had less than 10% of the squares punctured, but the average for that county was 47%. Chester County had the lowest County average of 33% punctured squares in four fields examined.

NORTH CAROLINA: Boll weevils were found in 91 of the 101 cotton fields examined in 15 counties in southern and eastern North Carolina, with an average infestation of 37% as compared to 19% last week and 6% a year ago at this time. The heaviest infestations are in Scotland County where all of the 7 fields examined had more than 50% of the squares punctured and the average infestation was 91%. In Hoke County six of the 7 fields examined had over 50% punctured squares and the average infestation was 72%. In Samson County 5 of the 7 fields examined had more than 50% of the squares punctured, with an average infestation of 60%. Fields with more than 50% of the squares punctured were found in Robeson, Cumberland,

Harnett, Johnston, Greene, and Wayne Counties. The 10 fields in which no weevils were found are in Harnett, Nash, Halifax, Northampton, Hertford and Edgecomb Counties. The boll weevil has already caused serious losses in destroying cotton squares and the weevil damage will be greatly increased because of the attacks on the bolls.

BOLLWORM

The bollworm increased in numbers in most all cotton areas throughout the State of Texas. In the central part of the state near Waco it is now causing more damage than any other insect. Many fields are heavily infested and some have been stripped of most all squares and bolls by the bollworm. In 22 fields examined there were an average of 12 eggs per 100 terminals, as compared to 1 at this time a year ago. This was the highest egg count at this date since 1942. In 15 fields an average of 11.5% of the squares were injured as compared to 3.1% a year ago on this date. This is the worst square damage recorded at Waco since records were started there in 1941. In 22 fields there was an average of 8.7 worms per 100 terminals. Much calcium arsenate and DDT mixtures are being used for bollworm control.

In the El Paso Valley of Texas bollworm infestations increased but are still not serious for the Valley as a whole. In lower Hudspeth County small acreages have been dusted with basic copper arsenate for their control.

I. J. Becnel, Louisiana Agricultural Experiment Station, on July 25, stated: "Bollworms moderate to serious on several farms in Caddo and Bossier Parishes. Bollworms and weevils combined are causing serious damage." W. S. McGregor, Extension Entomologist, on July 29 reported severe infestations of bollworms throughout Louisiana.

Many reports of bollworm infestation have been received from Pinal and Pima Counties, Arizona. Large acreages have been dusted for their control. The principal dust being used is 5% DDT and sulfur.

In Bolivar County, Mississippi, bollworms are more numerous than usual.

COTTON LEAFWORM

TEXAS: Leafworm ragging and stripping general in southern counties. Spotted poisoning being done for their control north of Waco. Many pupae and moths in coastal area. There is apparently a continuous light flight and a heavy flight is expected soon. New infestations were reported in Fisher, Hill, Midland, Williamson and Presidio Counties.

LOUISIANA: The first cotton leafworms in Louisiana this year were found in several fields in the vicinity of Shreveport in northwestern part of the state on July 25 by I. J. Becnel, Louisiana Agricultural Experiment Station. The worms were numerous. W. S. McGregor, Extension Entomologist, Baton Rouge, La., reported July 29, "Severe infestations leafworm and bollworm throughout Louisiana. Calcium arsenate supplies scarce." By July 30 leafworms were reported from Franklin, Catahoula, Rapides, St. Landry, Natchitoches and Caddo Counties. Poison needed in central part of State.

ARKANSAS: The first leafworms were found in Ashley County, in southeastern Arkansas near Parkdale July 22. Additional infestations have been reported in Ashley and Drew Counties. The worms were present in sufficient numbers to be found easily and the largest were nearly full grown.

COTTON FLEA HOPPER

Cotton flea hoppers continued low in Texas and Oklahoma. Flea hopper injury has been reported in the Delta section and in Lee County, Mississippi.

INSECTS ON IRRIGATED COTTON OF THE SOUTHWEST

The hemipterous insect infestations in general are lower this season in Arizona than normal, but are now on the increase, especially in the Marana District of Pima County and in Pinal and Graham Counties. Mr. Owens, County Agent of Graham County, Arizona, reported on July 20 that the stinkbugs were increasing at an alarming rate and that an airplane had been engaged to dust for their control. Much dusting has been done in the Salt River Valley and in Pinal County for hemipterous insect control. Damaging numbers of hemipterous insects, principally Lygus, were reported in several fields in the El Paso Valley of Texas.

MISCELLANEOUS INSECTS

Webworms: Damage from webworms continued in several counties in Oklahoma. The greatest losses suffered thus far have been in some of the southwestern and south-central counties. Spotted damage was reported from this insect in several areas in Texas, but no serious new infestations have been found.

Aphids: Aphids are on the increase in Pima County, Arizona and there are serious infestations in some fields south of Tucson.

In Texas aphids continue medium to heavy in some dusted fields. Predators and parasites are controlling the aphids in undusted fields where infestations were serious a few days ago.

Tarnished plant bug: Dr. S. Marcovitch, Entomologist, Agricultural Experiment Station, Knoxville, Tenn., wrote on July 23 that two weeks previously it had been necessary to dust cotton with DDT for control of the tarnished plant bug, Lygus oblineatus (Say).

Stinkbugs: From Williamson County in central Texas, James E. Gillaspay reported on July 22: "Stinkbugs, Thyanta custator, migrating from a mowed clover field completely destroyed bolls and squares on 10 acres of adjacent cotton and caused significant damage to another 8 acres on a farm 3 miles west of Taylor."

Cotton leaf perforator: Specimens of Bucculatrix thurberiella were collected by R. R. Rosa of this bureau on July 2 from cotton growing 3 miles southeast of Gregory, San Patricio County, Texas. This species is a serious pest in Arizona and California and although known to occur throughout Texas, it rarely becomes numerous enough to cause noticeable damage.

Pale-striped flea beetle: Dr. S. Marcovitch wrote on July 23 "This spring Mr. Simpson at the cotton farm here at Knoxville had an outbreak of the flea beetle, Systema blanda Melsh., on his cotton and had to dust for it."

July 31, 1946

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